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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/660,952

09/12/2003

Thomas H. James

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EXAMINER :

FAULK, DEVONA E

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/660,952	Applicant(s) JAMES ET AL.	
	Examiner Devona E. Faulk	Art Unit 2615	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8,10,11,13-17 and 19-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7,8,10,11,13,14,16,17,19,20,22,23,25 and 26 is/are rejected.
- 7) ☒ Claim(s) 6,15 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, regarding the amended claim language, filed 10/26/2007, with respect to the rejection(s) of claims 1,2,4,5,7,8,10,11,13,14,16,17,19,20,22,23,25,26 under 102(e) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Friar.
2. Regarding the claim objections to claims 6,8,15,17,24 and 26, the applicant has provided where this subject matter is disclosed in the specification to the examiner.
3. Claims 3,9,12,18,21 and 27 are cancelled.

### ***Specification***

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 6,16 and 24 recite "wherein the sub-band data represents the audio signal's power in each frequency band represented by each sub-band at a particular point in time". The specification fails to provide antecedent basis for the claimed subject matter. Page 9, line 16 of the specification recites "Initially, the sub-band data 400 is extracted from the MPEG data stream. The values of the sub-band data 400 represents the strength of the audio signal in a frequency band covered by the sub-band data 400 at that point in time. Appropriate correction is required."

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1,8,10 and 17,19,20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of Friedman (US 5,337,041) in further view of Frien (US 6,047,178).

Regarding claim 1, McDowell discloses a method of automatic measurement of audio presence and level by direct processing of a data stream representing an audio signal, comprising:

- (a) extracting sub-band data from the data stream (column 3, lines 24-28; implicit) ;
- (b) dequantizing and denormalizing the extracted sub-band data (step 126 Figure 9; column 11, lines 6-11);
- c) measuring an audio level for the dequantized and denormalized sub-band data without reconstructing the audio signal using channel characteristics (step 130 Figure 9; column 11, lines 58-62; characteristic is defined as a distinguishing feature, quality or property. The examiner asserts that the sub-band data reads on channel characteristics since the sub-band data is implicitly unique to its input signal); and
- (d) comparing the measured audio level against at least one threshold (step 136 Figure 9; column 12, lines 3-8).

McDowell fails to disclose means for triggering an alarm when the threshold is exceeded. Friedman discloses a means for triggering an alarm when the threshold is exceeded (column 10, line 65-column 11, line 7). It would have been obvious to modify McDowell as modified to include a means for triggering an alarm when the threshold is exceeded in order to provide an audible indication to the user to alert the user of a possible problem.

McDowell as modified fails to disclose wherein the thresholds are set to generate the alarm based on loss of the audio signal or when an average level of the audio signal is too high or too low.

Frian discloses generating an alarm based on loss of the audio signal. Frian discloses detecting the loss of audio and sending a signaling tone to the base station in response to the detection (column 9, lines 49-54). It would have been obvious to modify McDowell as modified to set the thresholds to generate the alarm when a loss of the audio signal is detected so that the user can be advised that communication has been terminated or loss.

All elements of claim 10 are comprehended by McDowell as modified (See McDowell as applied above to the rejection of claim 1). McDowell discloses a system and method, the system reading on apparatus (DTS, digital theater system, see title of invention; column 4, lines 50-67; columns 9-12)

All elements of claims 8 and 17 are comprehended by the rejection of claims 10.

Regarding claim 19, McDowell discloses a method and of automatic measurement of audio presence and level by direct processing of a data stream representing an audio signal, comprising:

- (a) extracting sub-band data from the data stream (column 3, lines 24-28; implicit) ;
- (b) dequantizing and denormalizing the extracted sub-band data (step 126 Figure 9; column 11, lines 6-11);
- c) measuring an audio level for the dequantized and denormalized sub-band data without reconstructing the audio signal using channel characteristics (step 30 Figure 9; column 11, lines 58-62; characteristic is defined as a distinguishing feature, quality or property. The examiner asserts that the sub-band data reads on channel characteristics since the sub-band data is implicitly unique to its input signal); and
- (d) comparing the measured audio level against at least one threshold (step 136 Figure 9; column 12, lines 3-8).

McDowell fails to disclose means for triggering an alarm when the threshold is exceeded. Friedman discloses a means for triggering an alarm when the threshold is exceeded (column 10, line 65-column 11, line 7). It would have been obvious to modify McDowell as modified to include a means for triggering an alarm when the threshold is exceeded in order to provide an audible indication to the user to alert the user of a possible problem.

McDowell as modified fails to disclose wherein the thresholds are set to generate the alarm based on loss of the audio signal or when an average level of the audio signal is too high or too low.

Frian discloses generating an alarm based on loss of the audio signal. Frian discloses detecting the loss of audio and sending a signaling tone to the base station in response to the detection (column 9, lines 49-54). It would have been obvious to modify McDowell as modified to set the thresholds to generate the alarm when a loss of the audio signal is detected so that the user can be advised that communication has been terminated or loss.

McDowell fails to disclose computer readable medium comprising a program storage device embodying executable instructions. The examiner takes official notice that a computer storage medium embodied with a program having executable instructions was known in the art. It would have been obvious to modify McDowell as modified by having an article of manufacture that included a program storage device embodying executable instructions to provide more efficient processing and so that the method of automatic measurement could be applied to various apparatuses.

All elements of claim 26 are comprehended by the rejection of claim 19.

7. Claims 2, 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of Friedman (US 5,337,041) in further view of Frian (US 6,047,178) in further view of Fiocca (US 5,625,743).

Regarding claims 2,11 and 20, McDowell as modified discloses using psychoacoustic measurements and implicitly a psychoacoustic model to determine perceptually irrelevant information (column 11, lines 25-46). McDowell as modified fails to disclose using a psychoacoustic model to determine a perceived level of the measured audio signal. Fiocca discloses using a psychoacoustic model to determine a perceived level of the measured audio signal according to human sensitivity (column 6, lines 57-67). It would have been obvious to modify McDowell so that the psychoacoustic model is used to determine a perceived level of the measured audio signal according to human sensitivity so that cut out unnecessary data in an audio signal thereby reducing the computational load on the processor.

8. Claims 4,5,13,14,22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of Friedman (US 5,337,041) in further view of Frien (US 6,047,178) in further view of Pierret et al. (US 3,843,942).

Regarding claims 4,5,13 and 14, McDowell as modified fails to disclose weighting an instantaneous level or an overall level. Pierret discloses weighting an instantaneous level (column 3, lines 60-63). It would have been obvious to modify McDowell to include averaging the audio level over time in order to provide improved automatic volume control.

Regarding claim 5 and 15, the examiner takes official notice that weighting is known in the art and can be applied to any set of data, including sound data. It would have been obvious to modify McDowell as modified to include weighting of the



instantaneous level or the overall level in order to give them more influence in the final result.

Regarding claims 22 and 23, McDowell as modified fails to disclose weighting an instantaneous level or an overall level. Pierret discloses weighting an instantaneous level (column 3, lines 60-63). It would have been obvious to modify McDowell as modified to weight the instantaneous level in order to give the instantaneous level more influence than other insignificant data over the final result.

Regarding claim 23, the examiner takes official notice that weighting is known in the art and can be applied to any set of data, including sound data. It would have been obvious to modify McDowell as modified to include weighting of the instantaneous level or the overall level in order to give them more influence than other insignificant data in the final result.

9. Claims 7,16 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of Friedman (US 5,337,041) in further view of Friar (US 6,047,178) in further view of Smith (US 2002/0173864).

Regarding claims 7,16 and 25, McDowell as modified discloses processing an audio level over time. McDowell as modified fails to disclose averaging the audio level over time. Smith discloses averaging an audio level over time (abstract; page 2, paragraph 0025; page 3, paragraph 0029 and 0037). It would have been obvious to modify McDowell as modified to include averaging the audio level over time in order to provide improved automatic volume control.

***Claim Objections***

10. Claim 6,15 and 24 are objected to because of the following informalities: Claims 6,15 and 24 recite "'.. in each frequency band..". The examiner asserts that it should recite ".. in a frequency band...". Page 9, line 16 of the specification recites "

Initially, the sub-band data 400 is extracted from the MPEG data stream.

The values of the sub-band data 400 represents the strength of the audio signal in a frequency band covered by the sub-band data 400 at that point in time. Appropriate correction is required.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DEF

  
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